

REMARKS

Claims 1, 5, 8, 9, 14, 16, and 25-27 remain pending after amendment.

Claim Amendments

By this amendment, editorial amendments are made in claims 1 and 16. Claims 2, 4, 7, 10-13, 15, 17-24, 28 and 29 are cancelled.

Claim 1 is amended to clarify that the metal layer is "oxidatively or chemically surface-treated" in an attempt to more clearly distinguish over the cited prior art. The revised claim 1 language is not intended to further limit the scope of claim 1 in relation to claim 1 as previously presented which provided for the presence of a "surface treated layer formed over a surface of the metal layer by chemical or oxidative treatment of the metal". However, applicants believe that this editorial amendment of claim 1 should be found by the Examiner to more clearly define applicants' claimed invention in a manner which distinguishes over the cited prior art. The dependency of claim 16 is revised.

No new matter is added by this amendment.

Restriction Requirement

Applicants acknowledge the Examiner's indication that the subject matter of claims 28-29 is distinct from the originally elected claims, and are thus withdrawn from examination. In response, applicants cancel claims 28 and 29, as well as the remaining claims which have been withdrawn from consideration.

Claim 1 Revision

Claim 1 is amended in the manner suggested by the Examiner by deletion of the "such as . . ." phrase in the claim.

Rejection under 35 USC 103(a)

Claims 1, 5, 8, 9, 14, 16, and 25-27 stand rejected under 35 USC 103(a) as being unpatentable over JP 11-086808 in view of JP 09-283101. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

The cited '808 reference is directed to a sealing bag for a non-aqueous electrolyte battery. The '808 reference aims to provide an improvement in the durability of a laminated sheet for a sealing bag for a non-aqueous electrolyte battery comprised of a metal layer and a plastic resin layer. Penetration of moisture and prevention of the thus-caused corrosion of the metal layer is suppressed by means of a specific plastic resin layer and directly bonding the resin layer with the metal layer by means of

heat lamination (see paragraphs [0003] and [0004] of the reference).

In contrast thereto, the present invention seeks to improve the interlayer bonding tightness of a laminate comprised of a metal layer and an adhesive resin layer for use in sealing the electrolyte or an electrode of a battery. This result is attained by oxidatively or chemically surface treating the surface of the metal layer prior to application of a specific resin for the resin layer.

As noted above, the respective inventions are distinct from each other with respect to both the purpose of each and the means used to achieve that purpose. One of ordinary skill in the art would accordingly not arrive at applicants' claimed invention upon being confronted with the teachings of the references.

By oxidatively or chemically treating the surface of the metal layer as claimed prior to application of the adhesive layer, an inert protective or passive film is formed on the metal surface. The Examiner's attention is directed to page 9, line 8 to page 10, line 17 of the specification on this point. Such an embodiment is clearly distinct from the vapor-deposited metal layer or adhesive layer which is physically or mechanically formed on the surface of the metal layer as taught by the reference.

More specifically, the metal layer taught by the reference is formed by depositing a metal vapor under high vacuum on a surface of the substrate, and hence is physically formed on the substrate. The adhesive layer of the reference is a layer of resin, such as polyurethane, epoxy resin, or polyester, which is placed over a metal layer. Such methods are distinct from the "oxidative or chemical" treatment methods used by applicants. More correctly, instead of corresponding to applicants' "oxidatively or chemically" formed layer, the reference's layer of adhesive corresponds to applicants' adhesive resin layer.

The respective results of the comparisons at Table 1 of applicants' specification confirm that adhesive strength is enhanced upon immersion in an electrolyte when an oxidatively or chemically surface-treated metal layer is used consistent with the claimed invention.

The cited JP '101 reference fails to cure the deficiencies of the JP '808 reference.

The reference teaches at paragraphs [0016] and [0023] that the reliability of sealing tightness of the heat seal part or a lead wire guide-out site of a sealing bag for a battery cell unit is facilitated by providing on the metal layer or metal face a maleic acid-modified polyolefin over the metal layer. However, the lamination of the maleic acid-modified polyolefin over the metal layer or metal face of the reference does not involve the

use of an oxidatively or chemically surface-treated metal layer as required by applicants' claimed invention. Indeed, the adhesive layer of the present invention is bonded to the previously oxidatively or chemically treated surface of the metal layer, but not to the untreated metal layer as taught by the reference.

The Examiner attempts to interpret the reference as inherently oxidatively or chemically treating the metal layer due to functionality on a polymer adhesive layer. The Examiner's assertion lacks factual foundation. In any event, the reference neither discloses nor suggests a laminate comprised of a polyolefin adhesive layer which is applied to an oxidatively or chemically modified metal layer as claimed by applicants.

Further, the teachings of the reference, when combined with those of JP '808, do not result in the claimed invention. Nothing in the reference would motivate one of ordinary skill in the art to modify the surface of the metal layer in the manner claimed by applicants.

In view of the above, it is clear that the claimed invention is neither taught nor suggested by the cited prior art, as the references fail to teach or suggest the chemical or oxidative treatment of the metal layer in accordance with applicants' invention.

In view of the above, the rejection is without basis and should be withdrawn.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact James W. Hellwege (Reg. No. 28,808) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 

Marc S. Weiner, #32,181

MSW/JWH/lab
0992-0127P

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000